

SUMMARY OF CONFIRMED INFECTIONS

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The December 2010 issue presents the laboratory diagnosis of some of the infectious diseases and the reference Microbiology and Virology work done in this laboratory during November 2010 and new cases of syphilis in Milwaukee during November 2010.

Syphilis

Test	Total	Test	Total
RPR Reactive	1	TPPA Reactive	9
VDRL Reactive	20	Darkfield Positive	0

New Cases of Syphilis: No new cases of syphilis were reported during the month of November 2010

Gonorrhea Antimicrobial Susceptibility Testing

Number Tested	Decreased Susceptible (DS) / Resistant (R) Antibiotics			
	Ciprofloxacin	Cefixime	Ceftriaxone	Azithromycin
26	3 (R)	0	0	2 (DS)

Isolates Other Than *N. gonorrhoeae*

Organism	Site	Number Isolates	Organism	Site	Number Isolates
<i>Ureaplasma urealyticum</i>	Genital	5	<i>Mycoplasma hominis</i>	Genital	4

Enteric Parasites Identified

Age	Sex	Parasite
51	F	<i>Blastocystis hominis</i>
45	M	<i>Blastocystis hominis</i>
37	M	<i>Blastocystis hominis</i>
5	F	<i>Blastocystis hominis</i>
31	M	<i>Cryptosporidium</i> species
31	F	<i>Blastocystis hominis</i>
		<i>Entamoeba coli</i>
10	M	<i>Iodamoeba buetschlii</i>
18	M	<i>Endolimax nana</i>
		<i>Iodamoeba buetschlii</i>
		Hookworm
19	M	<i>Endolimax nana</i>
30	M	<i>Endolimax nana</i>
6	M	<i>Entamoeba coli</i>
7	F	<i>Entamoeba coli</i>
12	F	<i>Entamoeba coli</i>
5	M	<i>Entamoeba coli</i>
13	M	<i>Entamoeba coli</i>
		<i>Entamoeba histolytica/Entamoeba dispar</i>
14	M	<i>Entamoeba histolytica/Entamoeba dispar</i>
9	M	<i>Entamoeba coli</i>
		<i>Giardia lamblia</i>
5	F	<i>Entamoeba coli</i>
		<i>Giardia lamblia</i>
12	F	<i>Entamoeba coli</i>
		<i>Giardia lamblia</i>
18	M	<i>Giardia lamblia</i>
14	M	<i>Giardia lamblia</i>
8	F	<i>Giardia lamblia</i>
29	M	<i>Hymenolepis nana</i>

Mycobacterial Infections

Age	Sex	Test Results			Identification
		Sputum Smear	Culture	DNA Probe	
26	M	-	+	+	<i>M. avium</i> complex
64	F	-	+	+	<i>M. avium</i> complex
40	F	-	+	+	<i>M. tuberculosis</i>
48	M	-	+	+	<i>M. tuberculosis</i>

ND = Not done

Reference Cultures

Age	Sex	Source	Identification
49	F	Tissue, L knee	<i>Blastomyces dermatitidis</i> *
16	F	Genital	<i>Neisseria gonorrhoeae</i>
19	F	Genital	<i>Neisseria gonorrhoeae</i>
32	M	Genital	<i>Roseomonas genomospecies 5</i> *
67	M	Blood	<i>Salmonella</i> Enteritidis
55	F	Stool	<i>Salmonella</i> Enteritidis
37	F	Stool	<i>Salmonella</i> Javiana
42	F	Stool	<i>Salmonella</i> monophasic
23	F	Stool	<i>Salmonella</i> Newport
57	M	Blood	<i>Streptococcus mitis</i> species/group

*Sequence-based ID (see below)

Salmonella cluster being reviewed:

Recently, PFGE has revealed a common pattern of 3 Milwaukee County Salmonella isolates. These match an additional 4 in Wisconsin. This cluster serotype, Salmonella Serotype 4,5,12:i:-, known simply as “monophasic”, has a PFGE fingerprint pattern seen increasingly in the Midwest over the last 60 days. In the past two weeks Indiana has posted 7 cases, Missouri 11 and Illinois 18. This serotype is antigenically similar and genetically closely related to Salmonella serotype Typhimurium, but lacks expression of flagellar antigens. CDC reports this serotype as the 6th most common Salmonella serotype of human disease in the US in 2006. MHD will continue to review these and similar cases.

Virus Isolations from Clinical Specimens

Age	Sex	Source	Symptoms	Agent
18	M	Throat	Fever, headache	Coxsackie virus type A10
18	F	Throat/NP	Fever (103°), headache, myalgia	Rhinovirus
20	M	Thigh	Vesicular rash	Varicella zoster virus
19	F	Chest	Vesicular rash, fever, headache, sore throat	Varicella zoster virus

Herpes Simplex Virus Isolations

Agent	Number of Isolates
Herpes Simplex type 1	6
Herpes Simplex type 2	10

Molecular Amplification and PCR

Agent	Method	Tested	Positive	% Positive
Influenza	RT-PCR	17	0	0%
Norovirus	RT-PCR	6	4	66.7%
<i>Bordetella pertussis/parapertussis</i>	RT-PCR	8	0	0%
<i>Chlamydia trachomatis</i>	ProbeTec	402	65	16.2%
<i>Neisseria gonorrhoeae</i>	ProbeTec/GenProbe	549	45	8.2%

DNA Sequencing: The MHD laboratory uses 16S rRNA and the D2 region of the 26S rRNA genes for DNA sequence-based microbial identification of selective reference bacteria and fungal isolates.

Reference Microbe	Target gene	Final Identification
Bacteria	16S	<i>Roseomonas genomospecies 5*</i>
Fungi	D2/26S rRNA	<i>Ajellomyces (Blastomyces) dermatitidis*</i>

Respiratory Virus Surveillance:

September 1 – December 8, 2010

Respiratory Virus Panel Test Results		
Virus	Positives	Percent
Human Metapneumovirus (hMPV)	0	0.0%
Influenza B (INFB)	0	0.0%
Human Rhinovirus (HRV)	9	9.3%
Parainfluenza virus 1 (PIV1)	0	0.0%
Parainfluenza virus 2 (PIV2)	4	4.1%
Parainfluenza virus 3 (PIV3)	1	1.0%
Respiratory Syncytial Virus (RSV)	0	0.0%
Adenovirus Type E (Adeno E)	0	0.0%
Coronavirus NL63	1	1.0%

Number Tested = 97

******* IMPORTANT NOTES *******

- **Mycobacteriology at the MHD Laboratory:**

A Real-time PCR assay is currently available at the MHD Mycobacteriology laboratory for the detection of *Mycobacterium tuberculosis* complex (MTBC) from the pulmonary specimens. The MTBC includes *M. tuberculosis*, *M. bovis*, *M. bovis* BCG, *M. africanum*, *M. microti*, *M. canettii*, *M. caprae*, and *M. pinnipedii*.

The MHD provides state-of-the-art TB lab services in a biosafety level 3 (BSL-3) laboratory and uses conventional and rapid methods for the isolation, identification, and limited susceptibility testing of *M. tuberculosis*, following the Association of Public Health Laboratories (APHL) and the Centers for Disease Control and Prevention (CDC) guidelines.

- **Update on the MHD Laboratory System Improvement Program (LSIP) assessment process:**

The scoring matrix results from the November 18th community assessment of the Local Public Health Laboratory System is now posted on the MHD website, <http://city.milwaukee.gov/LSIPresults>. This is just the initial report and a more detailed analysis of the day's efforts will be forthcoming as we begin our strategic planning based on the findings. For those of you that participated (75 participants from over 30 agencies) we again thank you for your time and input in the process.

- **Influenza:**

Since influenza 2009 A/H1N1 is now considered “post-pandemic”, all seasonal influenza PCR testing submitted to the MHD Laboratory will be no longer be “fee exempt”. Fee exempt testing will continue for MHD surveillance testing sites.

- **Christmas Holiday:** MHDL will be closed on Friday, December 24th and Monday, December 27th, 2010 for the Christmas holiday. The Laboratory will re-open for normal business hours on Tuesday, December 28th, 2010.
- **New Years Holiday:** MHDL will be closed on Friday, December 31st and Monday, January 3rd, 2011 for the New Years holiday. The Laboratory will re-open for normal business hours on Tuesday, January 4th, 2011.
- Please contact the laboratory at (414) 286-3526 or mhdlab@milwaukee.gov during normal business hours with any questions.
- In case of emergency or beyond normal business hours, please call the City Hall Operator at (414) 286-2150.